

## BOOK NOTICES

JIM L. BOWYER, RUBIN SHMULSKY, and JOHN G. HAYGREEN. 2007. **Forest Products and Wood Science: An Introduction (5th Ed.)**. (ISBN 978-0-8138-2036-1, hbk.). Blackwell Publishing, 2121 State Avenue, Ames, IA 50014-8300, U.S.A. (**Orders:** www.blackwellpublishing.com, 515-292-0140, 515-292-3348 fax, 1-800-862-6657). \$89.99, 568 pp., illustrations, 7¼" × 10¼".

A completely revised and updated edition of this textbook, providing students, wood scientists, and wood product professionals with an introduction to the anatomical and physical nature of wood and the relationship of these characteristics to use of wood as an industrial raw material. Chapters 1–7 introduce processes of growth and structure and chemical and structural characteristics; chapters 8–12 discuss physical properties of wood; chapters 13–17 discuss major wood-based products, the basic manufacturing processes associated with each, and how raw material selection affects product properties; chapters 18 and 19 discuss wood as a source of energy and chemicals and environmental implications of wood use.

**Contents.**—Introduction. 1) Tree Growth and Production of Woody Tissue. 2) Macroscopic Character of Wood. 3) Composition and Structure of Wood Cells. 4) Softwood Structure. 5) Hardwood Structure. 6) Juvenile Wood, Reaction Wood, and Wood of Branches and Roots. 7) Bark. 8) Wood and Water. 9) Density and Specific Gravity. 10) Strength and Mechanics. 11) Wood Durability and Protection. 12) Silvicultural Practices and Wood Quality. 13) Lumber. 14) Structural Panels. 15) Nonstructural Panels. 16) Composite Lumber Products. 17) Pulp and Paper. 18) Energy and Chemical Products. 19) Wood in the Global Raw Materials Picture.—*Guy Nesom, Botanical Research Institute of Texas, 509 Pecan Street, Fort Worth, TX 76102-4060, U.S.A.*

ANTHONY R. YEO and TIMOTHY J. FLOWERS (eds). 2007. **Plant Solute Transport**. (ISBN 978-1-4051-3995-3, hbk.). Blackwell Publishing, 2121 State Avenue, Ames, IA 50014-8300, U.S.A. (**Orders:** www.blackwellpublishing.com, 515-292-0140, 515-292-3348 fax, 1-800-862-6657). \$199.99, 424 pp., illustrations, 6¼" × 9½".

A technical consideration of solute transport, with easy-to-reach information owing to the detailed and highly organized subtopical structure of the discussions. Some of the topics include diversity and roles of solutes, physical bases of ion and water movement, solute movement across membranes, adaptation of solute use to more extreme environments, and internally-controlled dehydration concomitant with seed formation. "The book is directed at postgraduates, researchers, and professionals in plant physiology, biochemistry, and molecular biology."

**Contents.**—1) General Introduction. 2) Solutes, what are they, where are they and what do they do? 3) The driving forces for water and solute movement. 4) Membrane structure and the study of solute transport across plant membranes. 5) Transport across plant membranes. 6) Regulation of ion transporters. 7) Intracellular transport: solute transport in chloroplasts, mitochondria, peroxisomes and vacuoles, and between organelles. 8) Ion uptake by plant roots. 9) Transport from root to shoot. 10) Solute transport in the phloem. 11) Factors limiting the rate of supply of solutes to the root surface. 12) Mineral deficiency and toxicity. 13) Water-limited conditions. 14) Salinity. 15) Desiccation tolerance.—*Guy Nesom, Botanical Research Institute of Texas, 509 Pecan Street, Fort Worth, TX 76102-4060,*

RON RUSSO. 2007. **Field Guide to Plant Galls of California and Other Western States**. (ISBN 978-0-520-24885-4, pbk.). California Natural History Guide series no. 91. The University of California Press, Berkeley, CA 94704, U.S.A. (**Orders:** California Princeton Fulfillment Services, 1445 Lower Ferry Road, Ewing, NJ 08618, U.S.A., www.ucpress.edu, 609-883-1759, 609-883-7413 fax). \$24.95, 400 pp., 338 color illustrations, 89 line illustrations, 15 tables, 4½" × 7¼".

Plant galls are as fascinating as they are complicated to understand. Some may appear to be no more than deformities on the plant; others are quite beautiful in shape, texture, and color. All involve a complex relationship of the gall inducer to the plant, whether it be bacterium, fungus, insect, or mistletoe. In the clear, concise, and comprehensive introduction to cecidology, the author explains the various inducers and the differences between such gall responses and those of abnormal plant growth such as cankers, burls, and root nodules.

As a field guide, the book is arranged by plant types—trees, shrubs and then by family, such as ash galls, oak galls, with indication of the parts affected, which may be stem, leaf, inflorescence, root, etc. Color photographs and line drawings accompany the descriptions of the galls, their distribution, and approximate dates of appearance.

While the book concentrates on galls of the western states, many of the galls or similar ones, especially those of the cynipid wasps that constitute 75% of gall makers, are found across the continent. This book will be useful to horticulturists, particularly perhaps those engaged in conifer culture, but it will also be useful to botanists and others who interpret the natural world.—*Joann Karges, (TCU Library, retired), Botanical Research Institute of Texas, Fort Worth, TX, 76102-4060, U.S.A.*